

Notice of Allowability

Application No.

10/533,344

Examiner

Hien D. Vu

Applicant(s)

PABST, THOMAS BERNHARD

Art Unit

2833

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the communication on 12/21/07.
2. ☒ The allowed claim(s) is/are 1,3-18 and 20.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 12/21/07.
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Hien D. Vu

HENRY
PRIMARY EXAMINER

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mark Harrington on 12/21/07.

The application has been amended as follows:

1. (Currently amended) A connector for at least one flat flex cable comprising:
a housing comprising a top wall and at least one introduction opening for a flat flex cable end,
spring contacts connected to the housing for connecting the at least one flat flex cable with contacts or another flat flex cable, and
at least one strain relief, wherein the strain relief has a slide, which is sized and shaped to be introduced into the introduction opening over the flat flex cable in a direction at least partially along an introduction direction of the flat flex cable into the introduction opening, wherein the flat flex cable is bent by a rib on the slide into a recess at a bottom of the housing proximate the introduction opening until the slide locks in a final position on the housing, further characterized in that the slide forms a ramp, whose back end projects above the top wall and a level of the opening during introduction into the opening and slides on the upper edge of the introduction opening, whereby the rib is

pressed into the recess, and wherein the slide has a section, on a back end of the slide, with an operating surface for pressing the slide therein.

2. (Cancelled)
3. (Currently amended) The connector according to claim 1, wherein the slide comprises a shoulder for locking the ramp.
4. (Previously presented) The connector according to claim 1, further characterized in that the spring contacts, at a head end of the introduction opening, are prestressed perpendicular to longitudinal axis press on regions of conductive tracks of the flat flex cable that are stripped of insulation.
5. (Previously presented) The connector according to claim 4, further characterized in that the spring contacts are essentially bent in U-shape and comprise legs which are pressed onto the flat flex cable by two ramps on the slide.
6. (Previously presented) The connector according to claim 4, further characterized in that the spring contacts are formed with ends pointing away from the introduction opening as female connectors or plug contacts.
7. (Previously presented) The connector according to claim 4, further characterized in that the spring contacts are bent in U-shape at both of their ends and two introduction openings are disposed with their head ends abutting one another in housing for connecting two flat flex cables.
8. (Previously presented) The connector according to claim 1, further characterized in that the introduction opening takes up two flat flex cables, and two rows of spring contacts are provided one above the other.

9. (Previously presented) The connector according to claim 8, further characterized in that the spring contacts are held by an intermediate member in the introduction opening, and this member can be moved to the head end of the introduction opening by a slider and can be propped open at its back ends, in order to press strain relief projections disposed therein into corresponding openings punched in the flat flex cables.

10. (Previously presented) The connector according to claim 9, further characterized in that at the level of openings in the flat flex cables, housing has slots, into which the strain relief projections of intermediate member can be moved.

11. (Previously presented) The connector according to claim 8, further characterized in that the spring contacts are bent convexly at their legs that can be pressed onto flat flex cables and are pressed by shoulders of intermediate member onto the flat flex cables.

12. (Previously presented) The connector according to claim 11, further characterized in that on its head end, the intermediate member has ramps, with which the legs of spring contacts located away from the flat flex cables are to be pressed onto the flat flex cables.

13. (Previously presented) The connector according to claim 8, further characterized in that the slide can be locked in its final position on housing.

14. (Previously presented) The connector according to claim 1 wherein the introduction opening comprises a slot into a rear end of the housing, wherein the strain relief is inserted into the slot through the rear end of the housing.

15. (Previously presented) The connector according to claim 1 wherein the strain relief comprises a slot adapted to receive the end of the flat flex cable.

16. (Currently amended) A connector for a flat flex cable comprising:
a housing comprising an opening adapted to receive an end of the flat flex cable;
spring contacts connected to the housing, wherein the spring contacts are adapted to connect to electrical conductors of the flat flex cable; and
at least one strain relief connected to the housing, wherein the strain relief comprises a slide extending through the opening, wherein the strain relief comprises a slot adapted to have the end of the flat flex cable pass therethrough, wherein the slide comprises a rib, and wherein the flat flex cable is bent by the rib on the slide which is pushed inwardly at a rear end of the housing into a recess of the housing when the slide is locked into a final position on the housing, wherein the slide comprises a ramp having a rear end extending above the housing adapted to contact the housing and adapted to move the slide in a second direction when the strain relief is moved in a first direction inward into the rear side of the housing.

17. (Currently amended) A connector for a flat flex cable comprising:
a housing comprising an rear side having a slot adapted to receive an end of the flat flex cable;
spring contacts connected to the housing, wherein the spring contacts are adapted to connect to electrical conductors of the flat flex cable; and
at least one strain relief extending into the rear side of the housing at the slot, wherein the strain relief is movably connected to the housing such that the strain relief is

adapted to be pushed inward into the rear side of the housing, wherein the strain relief comprises a slide having a rib, and wherein the rib is adapted to bend the flat flex cable into a recess of the housing when the slide is slid through the rear side of the housing into the slot, wherein the slide comprises a ramp having a rear end extending above the housing adapted to contact the housing and adapted to move the slide in a second direction when the strain relief is moved in a first direction inward into the rear side of the housing.

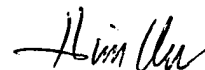
18. (Previously presented) The connector according to claim 17 wherein the strain relief comprises a slot adapted to pass the end of the flat flex cable therethrough.

19. (Cancelled)

20. (Previously presented) The connector according to claim 17 wherein the strain relieve comprises a latch for latching the slide in a final position on the strain relief.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hien D. Vu whose telephone number is 571-272-2016. The examiner can normally be reached on 9-5.

HV
12/21/07



HIEH DU
JURY EXAMINER